Understanding the Software Development Lifecycle (SDLC)

A Detailed, Business-Friendly & Practical Guide

Prepared by **AHOM Technologies**

Introduction to SDLC

SDLC stands for Software Development Lifecycle. It is a structured framework used to plan, design, develop, test, deploy, and maintain software. It provides a clear roadmap to manage complex software projects efficiently and is widely used worldwide.

Key Insight: SDLC brings clarity, discipline, and predictability.

Why SDLC is Critical for Businesses

SDLC prevents budget overruns, reduces risks, improves collaboration, and ensures timely delivery of scalable software solutions.

Complete SDLC Flow

Planning → Requirements → Design → Development → Testing → Deployment → Maintenance

Planning & Requirement Analysis

Planning defines goals and risks. Requirement analysis gathers and documents business and user needs clearly.

System & UI/UX Design

Design includes system architecture, UI/UX, database planning, security, and technology selection.

Development

Code is written based on designs, following best practices, standards, and version control.

Testing & Deployment

Testing ensures quality. Deployment releases software to live environments with monitoring.

Maintenance & Support

Ongoing bug fixes, updates, performance improvements, and security patches.

SDLC Models & Final Takeaway

Popular models include Waterfall, Agile, and DevOps. SDLC ensures reliable and scalable software.

Learn more at **www.ahomtech.com**